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ABSTRACT

The 1982-83 report on the Individualized Bilingual Instruction (IBI) Interstate Training Project evaluates Project activities in Washington and Texas, funded through Section 143 of the Migrant Education Interstate and Intrastate Coordination Program. The purpose of the Project is stated: to disseminate the Pasco (Washington) School District's method of training bilingual education migrant program staff. The first part of the report answers questions policy makers might ask in evaluating whether the project is fulfilling the Congressional mandate. The section indicates that the Project has provided a service to migrant children which would have been impossible without 143 funding; better utilization of resources has been achieved through coordination; coordinative planning has resulted in agencies served making a commitment to the Project and has taken place at nearly every level of involvement with migrant education; the project provided on-site inter/intrastate services; and services resulted in higher-quality programs for migrant children. The second part provides documentation on achievement of specific Project goals through June, 1983. Summaries indicate that 104 teachers/teaching aides and 14 supervisors were trained in 15 schools, which benefitted 938 children, and that after the IBI training model was introduced, gain scores by children in the program showed significant superiority in 9 out of 10 comparisons. (MH)

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REPORT ON THE IBI INTERSTATE TRAINING PROJECT:

A PROGRAM FUNDED THROUGH SECTION 143, MIGRANT EDUCATION INTERSTATE AND INTRASTATE COORDINATION PROGRAM.

FUNDING PERIOD COVERED BY THIS REPORT 1982-83.
THIS IS THE FIRST IN A SERIES OF REPORTS ON A MULTI-YEAR PROJECT.

GRANTEE AGENCY: SEA FOR WASHINGTON STATE
RAUL DE LA ROSA, DIRECTOR OF MIGRANT EDUCATION, OFFICE OF THE SUPERINTENDENT OF PUBLIC INSTRUCTION, OLYMPIA, WASHINGTON

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REPORT PREPARED BY BEVERLY MCCONNELL

RC014555

INDIVIDUALIZED BILINGUAL INSTRUCTION

Raul de la Rosa
Director of Migrant Education Programs
Office of the Supt. of Public Instruction
Old Capitol Building
Olympia, Washington

Dear Mr. de la Rosa:

This report represents an evaluation of the first year (1982-83) of the IBI Interstate Training Project. It describes the project activities in the area of inter and intrastate coordination, planning and awareness activities related to program dissemination, and training activities conducted in Washington State and Texas.

The evaluation has been written in two parts. The first part provides evaluation from a broad perspective, designed to answer the kinds of questions policy makers might be asking in evaluating whether 143 projects are fulfilling the mandate of Congress. The second part of the evaluation provides documentation related to the specific operational goals of the IBI Interstate Training Project through June, 1983.

It is hoped that reporting on the program from these two perspectives will make the evaluation useful to a wider audience that includes policy makers as well as program administrators and staff.

Sincerely yours,

Beverly B. McConnell

Beverly B. McConnell
Project Evaluator

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PROGRAM DESCRIPTION--IBI INTERSTATE TRAINING PROJECT

This project was funded in 1982 to the SEA in Washington State. Its purpose was to fund dissemination of a method of training migrant education program staff developed by Pasco School District, an LEA in Washington State, under the name of the IBI project (IBI=Individualized Bilingual Instruction). This project has been nationally validated by the U.S. Dept of Education. The validation was based on evidence that children taught by bilingual staff trained in the IBI model consistently made significant gains in language skills and in basic academic subjects.

The first year of funding for the IBI Interstate Training project was a start-up year the goals of which were:

--recruitment and training of staff who could provide training services to other agencies

--dissemination to migrant education agencies in two states initially, Texas and Washington. This involved planning steps and providing actual on-site training to program staff.

--setting up an evaluation plan to check whether new agencies using the program are achieving similar learning gains with children; documentation of program activities.

--awareness activities designed to provide information to potential users leading to dissemination into other districts and states in the second and third program year.

***

PART I

EVALUATION IN TERMS OF GENERAL POLICY QUESTIONS RELATING TO 143 PROGRAMS

HAS THE PROGRAM ACHIEVED A TYPE OF SERVICE TO MIGRANT CHILDREN THAT WOULD NOT HAVE BEEN POSSIBLE WITHOUT 143 FUNDING?

Yes. Until there was a set aside of money for 143 intra and interstate programs, all migrant education funds were channeled to states and local education agencies for use within their own geographic area. This meant that if money was used by a local agency to provide assistance to another school district (in the same state or another state) it would have to be at the cost of reduced services to children in the local program

With the set aside of 143 monies, it was possible to channel money to an LEA with a validated program model and have this money used not for the local program but entirely to provide technical assistance and actual training services to other migrant education agencies. In this project, staff to provide technical assistance and training services were based in Texas and in Washington and each served programs in several different cities and schools within these two states. (The program design was to expand this service to other states in the second and third year of program operation.)

HAS THE PROGRAM ACHIEVED BETTER UTILIZATION OF RESOURCES THROUGH COORDINATION?

Yes. In addition to the coordination across state and district lines that has enabled many new agencies to implement an effective training model, the program is an example of interagency coordination. The funds to develop and field test

the IBI training model came from Bilingual Education (ESEA Title VII). The dissemination of the program to other migrant education agencies comes from the 143 monies, Migrant Education. This type of coordinative funding between programs enables maximum utilization of development costs that have already been paid to produce and field test a model program. Dissemination of successful educational practices instead of leaving each agency to develop its own materials represents a cost effective way of improving program quality.

HAS COORDINATIVE PLANNING RESULTED IN THE AGENCIES RECEIVING SERVICES MAKING A COMMITTMENT TO THE PROGRAM?

The funded agency is committed to providing services in accordance with the project design. Whether these services are valued by the agencies to which they are offered, however, may be measured by the degree to which the receiving agencies are willing to participate in planning and to use their own resources to facilitate the program effort. In the IBI Interstate Training Project, there has been a good deal of evidence of committment by the agencies receiving training and technical assistance. Part of the planning process before 143 trainers go in to serve a new program is to develop a written agreement which spells out the committment on both sides. The agency receiving the training agrees to pay for all curriculum materials and training materials necessary to implement the IBI model. In addition most agreements specify that the program will provide sufficient staffing to maintain necessary child/staff ratios, pay to release staff time for training, and cooperate with evaluation to determine whether the program is successful.

One agency desiring services budgeted a new position (a trainer) who was trained by the IBI project and who then

provided all training in two new schools using the IBI model. Another committed office space for the 143 training staff. Several agencies interested in the IBI training model paid for substitutes plus travel and per diem to allow their teachers to visit the IBI development sites when they were making the decision about whether they wanted to adopt the training model. Some agencies interested in using the model also paid for parents to make this site visit so they could participate in the decision about whether to use the program. In summary, the project has generated real and concrete evidence of committment in both the planning and implementation phase by the agencies receiving services from the IBI Interstate Training Project.

AT WHAT LEVELS HAS COORDINATIVE PLANNING BEEN CARRIED OUT?

The planning process has involved nearly every level of the people involved with migrant education. In Washington State personnel from the state migrant education office, and from a regional office, have been involved in telling other agencies about the IBI training model and suggesting that they visit or seek information about it. In one instance a regional staff member accompanied groups on such a site visit and sat in on later planning meetings. The service agreements have involved the administrative personnel of programs and the 143 staff. The site visits have usually involved teachers and aides who might be using the program, as well as administrators so that all level of staff have been informed and able to make a decision about whether to use the IBI model. In Texas the 143 staff were invited to make a presentation to the parents at evening parent meetings after which parents voted to use the IBI training model. This endorsement is documented through minutes from the parent meetings.

In summary, parents, teachers and aides, and administrators at the LEA, regional and state levels have all been involved in the planning that led to providing 143 services to new agencies.

HAS THE PROGRAM PROVIDED ACTUAL ON-SITE SERVICES ON AN INTRASTATE AND INTERSTATE BASIS?

Prior to the set aside of 143 monies, most of the coordination between states was at an information sharing level (meetings of representatives from different programs; visits by personnel in one state to another state to bring back information to the home site, etc.) With the IBI Interstate Training Project the coordination was the planning step to provision of actual training services; hands on contact between staff of the development site and migrant education staff in other places.

Experience has shown that effective dissemination of educational programs requires this type of hands on contact. (The federally funded PIP program attempted to disseminate model programs by "packaging". All the program descriptions, curriculum materials, management guides, etc. were printed, and these PIP's (program information packages) were sent out to other school districts. This program was generally considered to be a failure. The written materials alone did not seem to be enough to transport a good idea from one location to another.)

By providing training and follow-up services at the site of the other agencies, it was possible for IBI staff to adapt the program to local needs. As documented later in this report the IBI Training project sent staff out to do training in eight schools in seven different cities in Texas, and to seven schools in four different cities in Washington state, which far exceeded the project goals for the first year.

IS THERE EVIDENCE THAT THE SERVICE ACTUALLY RESULTED IN HIGHER QUALITY PROGRAMS FOR MIGRANT CHILDREN?

Yes there is such evidence. Part of the IBI Training Project proposal was to test a sample of children enrolled in new schools receiving IBI training in order to evaluate whether the training

was effective by the most relevant of all measures -- whether children were showing better academic progress than they had before using the IBI training model. Testing took place in programs in Texas using the model with preschool children. The results showed that children who had attended the program under IBI trained teachers for 100 or more days were significantly better in English and Spanish vocabulary, handwriting, and premath and reading readiness skills. In comparison, children who had attended the same schools for 100 or more days during the period before adoption of the IBI model had made significant gains in only two of these five subject areas, premath and English vocabulary, and made these gains at only one age level.

In summary, the evaluation showed that both preschool programs helped children develop language and academic readiness skills over the level of migrant children who had no preschool experience. But the children under IBI trained teachers made much greater gains than were made by children in the program it replaced. Details on this comparative research is provided in the second part of this report.

PART II

ACHIEVEMENT OF FIRST YEAR PROJECT OBJECTIVES

HOW HAS THE IBI INTERSTATE TRAINING PROJECT CARRIED OUT PLANNING AND AWARENESS ACTIVITIES?

The original project proposal called for setting up a meeting to which representatives from various states would be invited to have a detailed look at the IBI training model and to discuss whether they would like to have this training offered in their state and how to coordinate plans for this expansion. When the funding for this planning conference was eliminated from the proposal, this plan was revised to rely on a presentation that would be made at the national Migrant Education Title I meeting, to let people know about the project. In addition to this a packet of materials about the program was developed that could be distributed to people who requested it, either at the national meeting, or in response to letter or phone inquiries.

A presentation was prepared and made at the national Title I conference, generating quite a bit of interest in the training project. A packet of materials was also developed and was sent out to people who made specific inquiries. These activities met the project goal in this area.

Beyond that, staff solicited inquities from users in their immediate geographic area. This resulted in several requests for meetings with administrators and IBI 143 staff made presentations about the program to decision makers within interested agencies. When interest was expressed, 143 staff suggested that administrators, plus teachers and parents make a site visit to one of the development sites (IBI has a development site in Texas and two in Washington state.) In this way teaching staff were also brought into the decision making and planning process. In agencies where there was an active parent group, 143 staff also offered to make presentations about the IBI program at a parent meeting. Several presentations were

made to parent groups and in all cases the parents then voted that they wanted the IBI training model for the program their children attended.

IBI 143 staff followed these procedures to involve parents and teachers as well as administrators out of a conviction that educational programs are more likely to succeed if as many people as possible who are affected by the program change are involved in the planning process.

Planning toward future expansion into other states was done by telephone and letter contact, with varying success. In one state IBI staff expected to be asked to make a presentation at a state conference. After agreeing to the presentation the planners of the conference never got back to IBI to notify them of when the meeting was to take place. In another state in the north, initial planning has resulted in plans to send a delegation from that state to make a site visit to the IBI site in Texas. This will involve administrators who are considering asking the IBI Interstate Training Project to provide training during the summer of 1984.

In summary, the project fulfilled its plans to develop written materials to create awareness about the program; to present at a national meeting of migrant educators from other states. In this way, and through telephone and letter contacts, the project has laid the groundwork for future expansion into other states.

In the two states where dissemination was attempted during the first project year, the planning steps involved awareness presentations, site visits, meetings with administrators, talking with teachers and parents to involve as many people as possible in the decision to accept the IBI training. Agreements were worked out with every school where the project provided training services. These agreements specified not only the services to be provided by IBI 143 staff, but the committment of the recipient agency to support the program in various ways. These included the purchase of materials needed, providing staff ratios specified, freeing staff for site visits and training

sessions, and helping with evaluation if that school was one in which the 143 program was carrying out testing for evaluation purposes.

These activities meet and exceed the program goals in regard to planning and awareness activities.

WHAT TRAINING ACTIVITIES HAVE BEEN PROVIDED BY THE IBI INTERSTATE TRAINING PROJECT?

The first goal of the project year was to recruit and train the 143 training staff that would give the project the capability of outreach to new agencies. The project was budgeted for 2.5 FTE trainers for the 143 dissemination.

It requires a period of at least three months to completely train a new trainer in the IBI training model.

Three trainers were employed and given training. Two reached full certification and one partial certification (i.e. capable of carrying out some parts of the training but not all). In addition to the staff employed through 143 funds, another agency funded a training position, and IBI staff provided training to this person who also reached full certification in the IBI training model. With training staff already employed under other funding at the demonstration sites, this gave the program 3.5 trainers in Washington and 4 in Texas. All of these were used to some extent in the 143 training. The 143 funding for trainers was used in combination with other funding to support this training staff. This greatly increased the outreach of the program.

The other training goal was provision of actual on-site training to migrant education agencies which chose to adopt the IBI training model. Figure 1 which follows summarizes the training provided--by schools, cities, classrooms, teachers and aides trained, administrators or supervisory personnel trained and the number of students affected. Individual training sessions is also shown (this is taken from the

weekly training records submitted by staff). Most of the IBI training is individualized; a few presentations can be made to a group of teachers, but most training consists of coaching one teacher, or observing one teacher and conferencing her or him on their teaching performance after the observation. This type of training is far more intensive and takes more time than workshops or similar large group training methods. It also has far more impact than large group training because of the individualized follow-up. If the trainee does not understand and cannot implement new teaching behaviors it is obvious to both the trainer and the trainee, and further coaching is carried out until the trainee masters and can demonstrate new teaching skills.

	Washington	Texas	Program Total
Cities in which training was given	4	7	11
Schools in which training was given	7	8	15
Classrooms involved	18	30	48
Administrators or supervisory staff trained	5	9	14
Teachers or Aides Trained	32	72	104
Training sessions reported	90	454	544
Average sessions per teacher	3	6	5
Students benefitted	333	605	939

FIGURE 1. SUMMARY STATISTICS ON TRAINING SERVICES GIVEN DURING THE 1982-83 PROGRAM YEAR BY THE IPI INTERSTATE TRAINING PROJECT.

Note: Supporting documentation by school is given in Table 1 in the appendix.

The interest shown in receiving training from the IBI INterstate Training Project greatly exceeded expectations of the amount of interest that could be generated in the first year. The goals for training for the first year were rather modest, to train 20 to 25 teachers. As shown in Figure 1, the number actually trained far exceeds that project goal. It was possible only because additional trainers (supported by other funding) were used in the 143 dissemination.

WHAT EVALUATION ACTIVITIES HAVE BEEN CARRIED OUT BY THE IBI INTERSTATE TRAINING PROJECT?

The first goal in program evaluation was to establish a system of documentation of all project activities. This was used to monitor progress toward meeting program objectives as part of the management of the program. And it also served to provide the documentation for this final report.

All 143 trainers submit a weekly report in which they identify training activities by site, subject area of training and trainees. Project administrative staff is usually responsible for setting up awareness presentations and site visits, and this is documented through memo. The preplanning steps before going into a new site to do training includes development of the services agreement referred to earlier in this report. This specifies responsibilities by IBI and by the agency receiving the training. These agreements provide the information on supervisor at the site, number of classrooms, and the students involved at a particular location. In this manner, documentation has been collected on all levels of project activities, meeting the project goals in this regard.

The second evaluation goal was to measure the quality of the service being given in terms of the benefits realized by migrant children. The IBI project in its original sites was

validated on the basis of evidence that children taught by IBI trained staff consistently showed gains in language skills and academic subjects large enough to be statistically significant. The evaluation of child progress at a sample of the new sites served by the IBI Interstate Training Project was designed to learn if children at these sites were making the same kinds of gains. The evaluation was also designed to test whether children made <u>better</u> progress under the IBI model than they had in the educational program is use before the IBI training was given.

To test these evaluation questions three sets of test groups were used. The replication sites chosen for this evaluation were in Texas, and the program was being used with preschool children, age four and five. At these sites, children were tested when they first enrolled in the program. These tests scores represented the effect of having had no preschool program experience, and is referred to in the evaluation as the "no program" control group. Another group of children were tested who had been enrolled in the previous year for 100 days or more. The test scores of these children were referred to as the "Before IBI" comparison group since their achievement represented the result of preschool education received under the program in use before IBI was instituted. Finally children were tested who had been enrolled in the program under IBI trained teachers for 100 or more days. None of the children who had been enrolled the previous year were included in this group, so their test scores represented only the effects of the educational program using the IBI model. This group was referred to as the "After IBI" treatment group.

Both the "Before IBI" group and the "After IBI" group's test scores were compared to the "no program" group to see whether either program produced significantly higher achievement in the five tests given. These tests measured children's vocabulary in their primary and second language (Spanish and English) and in the academic readiness skills in math, reading and handwriting.

A "t-test" analysis was done to see whether the differences between the mean scores (of the no program group and each of the two treatment groups) was large enough and consistent enough to be statistically significant, i.e. to rule out the possibility that the differences might have occured simply by chance. In educational evaluation a finding that the probability is less than 5 in 100 that differences beteeen mean scores of two groups could have occured by chance is taken to indicate that the differences are "statistically significant". If the probability is even less than that, i.e. less than 1 in 100, then there is said to be a "high level" of statistical significance, i.e. almost no probability that the differences would have occured simply by chance.

The statistical results of this analysis are given in Table 2 in the appendix. But a quick visual summary of the findings is shown in Figure 2 below. The program in place before IBI clearly benefitted children. The mean score of children who had been in that program 100 or more days was higher at both age levels on every test than the no program group. But in most cases the gains in achievement level were not large enough to be statistically significant -- e.g. two out of ten comparisons produced a significant superiority. In comparison, after the IBI training model was introduced, nine out of ten comparisons showed a significant superiority for program children.

COMPARISON OF GAIN SCORES MADE BY CHILDREN BEFORE AND AFTER STAFF RECEIVED IBI TRAINING

	Gains made by children during the year before IBI training.		Gains made by children after IBI training	
	AGE 4	AGE 5	AGE 4	AGE 5
English vocabulary	2.46**	1.11^{ns}	2.01**	1.27^{ns}
Spanish vocabulary	1.71^{ns}	0.36^{ns}	4.08**	6.66**
Premath	1.32*	1.76^{ns}	2.07**	3.10**
Prereading	0.33^{ns}	1.72^{ns}	1.78**	1.88**
Handwriting	1.23^{ns}	2.09^{ns}	1.54**	2.84**

ns=gain is not statistically significant
*=gain is statistically significant at a low level, $p<.05$
**=gain is statistically significant at a high level, $p<.01$

FIGURE 2. Difference in mean scores between children in two preschool education programs, compared to scores of children receiving no preschool education.

The conclusion that can be drawn from these findings is that the replication of the IBI training model is helping migrant children to make significant gains in language and academic skills. Gains in the replication sites evaluated were similar to those made by children in the original development sites, on the basis of which IBI was validated as an "exemplary" educational program. And the findings also show that the IBI training was a much more powerful program than the educational program it replaced.

IN SUMMARY

The IBI Training Project carried out fully the activities outlined in its project proposal, meeting or exceeding all goals. These activities included making an awareness presentation at the national Title I migrant conference as well as the dissemination of written materials to inform other migrant education agencies about the project. It included coordination and planning with other migrant education agencies in two states; planning efforts which resulted in substantial committment of resources by the agencies receiving the services of 143 training staff, and which involved parents, teachers, and administrators.

The IBI project trained teaching staff in 15 different schools, involving 104 teachers or teaching aides and 14 administrators or supervising teachers. These services benefitted 938 children.

The project has set up an efficient system of documenting its services enabling sound program management. It has also evaluated for quality control, finding that there are substantial benefits to migrant children's education as a result of the IBI Interstate Training project.

This type of outreach from one project, crossing district boundaries on an intrastate basis, and operating in two states (with planned expansion to other states in subsequent years of the project long term planning) could not have been achieved except through the 143 set aside of migrant education funds for intrastate and interstate programs.

APPENDIX

TABLE 1: IBI INTERSTATE TRAINING PROJECT
1982-83 Training

Alamo, Texas Supv. Diana Martinez
4 classrooms 75 students

Trainees:	Training Units:
Alvarado, Lillian	8
Chapa, Sylvia	8
Grimaldo, Criselda	10
Goodrow, Minerva	2
Gonzalez, Elisa	5
Hinojosa, Daniel	10
Martinez, Diana	9
Gutierrez, Jose	2

Donna, Texas Supv. Olga Molina
4 classrooms 55 students

Trainees:	Training Units:
Avendaño, Carmen	7
Paz, Mike	6
Valdez, Aurora	8
Yanez, Maria	9
Paloma, Bianca	9
Hernandez, Navia	7

Mission, Texas Supv. Celia Chapa-Tirado
4 classrooms 80 students

Trainees:	Training Units:
Aceves, Mary	5
Garcia, Ricardo	6
Garza, Martha	10
Chapa, Celia	7
Garza, Reynaldo	10
Martinez, Miroslava	13
Guerrero, Marta	1
Salinas, Sylvia	4
Vasquez, Dora	5
Perez, Marta	3

Pharr, Texas (Kelly St.)
Supv. Gloria Villarreal
4 classrooms 80 students

Trainees:	Training Units:
Almaguer, Ludvina	4
Bacerra, Rita	8
Cantu, Livia	11
Castillo, Estella	6
Garcia, Rose	3
Gutierrez, Gracie	2
Heriera, Elena	7
Montemayor, Norma	13
Rivera, Sally	6
Montes, Ignacio	3

Pharr, Texas (Hawk St.)
Supv. Marisol Torres
Supv. Bianca Paloma
5 classrooms 85 students

Trainees:	Training Units:
Bravo, Cruz	11
Cantu, Mari	8
Chapa, Raquel	3
Banda, Juli	6
Hooks, Ronnie	3
Rosales, Romeo	4
Samudio, Jay	6
Ruelas, Gerardo	5
Soto, Dagoberto	10
Torres, Marisol	8

Rio Grande City, Texas
Supv. Odelia Bocanegra
2 classrooms 60 students

Trainees:	Training Units:
Garza, Arcadia	1
Benevides, Romeo	6
Flores, Maria	11
Marchan, Concepcion	5
Peña, Araceli	3
Villarreal, Sara	9

Sullivan City, Texas
Supv. Juanna Guerra
3 classrooms 70 students

Trainees:	Training Units:
Borrego, Liliana	6
Garza, Melba	6
Flores, Maribel	6
Ortiz, Irene	5
Ramirez, Criselda	3
Solis, Juanita	2
Villarreal, Guillermina	11
Zarate, Natalio	3
Zarate, Elda	3

Pasco, Washington (Eastside Preschool)
Supv. Mike Prudhomme
2 classrooms 24 students

Bohannan, Barbara	3
Henderson, Darlinda	3
Murray, Nancy	3

Pasco, Washington (McGee)
Supv. Sue Riley
1 classroom 14 students

Ortega, Liz	1

(continued)

Weslaco, Texas
Supv. Raul Quintanilla
4 classrooms 100 students

Trainees:	Training Units:
Abelando, Hermina	8
Aceredo, Sandra	1
Bara, Yolanda	5
Bowie, Oscar	10
Caballero, Janie	6
Diaz, Liza	8
Gutierrez, Marlen	7
Molina, Olga	7
Ramirez, Sylvia	4
Vasquez, Alejandro	6
Vargas, Sandra	4
Villarreal, Santiago	10
Zuniga, Natalia	7

Pasco, Washington (Emerson School)
Supv. Sue Riley
1 classroom 30 students

Trainees:	Training Units:
Fast, Sandra	3
Ortiz, Doris	2
Ott, Linda	2
Taylor, Thonda	2
Vidaurri, Janie	3

Pasco, Washington (Longfellow School)
Supv. Sue Riley
5 classrooms 95 students

Kuame, Julie	1
Gorski, Tony	2
Stone, Diane	1

Kennewick, Washington
Supv. Vicky Gregorich
3 classrooms 60 students

Trainees:	Training Units:
Castillo, Mary	2
Duncan, Alice	1
Herrick, Ester	1
Freer, Barbara	3
Keeting, Nancy	1
Pearson, Becky	3
Talbert, Georgio	1
Wagner, Karen	1

Basin City, Washington
Supv. Jaime Ramiriz
2 classrooms 40 students

Solis, Juanita	4
Garza, Melba	5
Ortiz, Irene	6
Flores, Lydia	5

Eltopia, Washington
Supv. Elia Flores
4 classrooms 70 students

Trainees:	Training Units:
Borrega, Liliana	4
Flores, Maribel	1
Ortiz, Consuelo	3
Rivera, Rosa	2
Rivera, Sylvina	3
Venecia, Rosario	5
Zarate, Elda	5
Zarate, Natalia	5

*A training unit represents a training session on one day. Sometimes a trainer would present to a number of trainees at the same time, but more often it would consist of individual coaching, observation of trainee teaching with conferencing later.

TABLE 2

MEAN SCORES OF CHILDREN BY TYPE OF PROGRAM INVOLVEMENT

		AGE 4			AGE 5		
		No Program	Before IBI	After IBI	No Program	Before IBI	After IBI
English Vocab.	N	145	44	57	53	16	45
	Mean	7.90	10.36	9.91	11.77	12.88	13.04
	Sig.		<0.004	<0.006		<0.574	<0.426
Spanish Vocab.	N	145	44	57	53	16	45
	Mean	26.97	28.68	31.05	32.58	32.94	39.24
	Sig.		<0.281	<0.004		<0.888	<0.000
Pre-Math	N	152	35	58	57	15	47
	Mean	5.19	6.51	7.26	6.84	8.60	9.94
	Sig.		<0.023	<0.000		<0.097	<0.000
Pre-Reading	N	152	35	58	57	15	47
	Mean	6.24	6.57	8.02	8.21	9.93	10.09
	Sig.		<0.616	<0.000		<0.067	<0.005
Hand-Writing	N	152	35	58	57	15	47
	Mean	3.77	5.00	5.31	7.44	9.53	10.28
	Sig.		<0.083	<0.007		<0.131	<0.007

Sig.=Level of statistical significance; i.e. the probability that the difference between this mean score and the mean score of children in the no program group of the same age might have occured by chance.